

CLAIMS

1. A file processing method comprising:  
a compressing step which divides a file into a  
5 plurality of sections and compresses each section of  
the file using a plurality of compression  
parameters; and  
a storing step which stores a compressed file  
10 in a storage medium.
2. The file processing method as claimed  
in claim 1, wherein said compressing step uses the  
plurality of compression parameters based on a  
distribution of an appearing frequency for each word  
15 within said file.
3. The file processing method as claimed  
in claim 1, wherein said compressing step includes a  
flag which indicates non-compressed data in control  
20 information of a certain section, if data in the  
concerned section has a larger amount of information  
in a form of compressed data than the non-compressed  
data.
- 25 4. The file processing method as claimed  
in claim 1, wherein said compressing step includes  
identification information of the compression  
parameters in control information of each section.
- 30 5. The file processing method as claimed  
in claim 1, wherein said compressing step adds end  
information which indicates an end of a section to  
an end of each section, adds the end information to  
only a last section when the sections have a fixed  
35 length, and includes a flag indicating that the end  
information is deleted in the control information of  
the sections other than the last section.

10073245-021302

6. The file processing method as claimed in claim 1, further comprising:

5 a step which expands the compressed file which is read from the storage medium by a driver software which is independent of an application software of a computer.

10 7. A data processing apparatus comprising:

a compressing process section which divides a file into a plurality of sections and compresses each section of the file using a plurality of compression parameters; and

15 a storing process section which stores a compressed file in a storage medium.

8. The data processing apparatus as claimed in claim 7, wherein said compressing process  
20 section uses the plurality of compression parameters based on a distribution of an appearing frequency for each word within said file.

9. The data processing apparatus as  
25 claimed in claim 7, wherein said compressing process section includes a flag which indicates non-compressed data in control information of a certain section, if data in the concerned section has a larger amount of information in a form of compressed  
30 data than the non-compressed data.

10. The data processing apparatus as  
claimed in claim 7, wherein said compressing process  
section includes identification information of the  
35 compression parameters in control information of each section.

10073245-021302

11. The data processing apparatus as claimed in claim 7, wherein said compressing process section adds end information which indicates an end of a section to an end of each section, adds the end  
5 information to only a last section when the sections have a fixed length, and includes a flag indicating that the end information is deleted in the control information of the sections other than the last section.

10

12. The data processing apparatus as claimed in claim 7, further comprising:

an expanding process section which expands the compressed file which is read from the storage  
15 medium by a driver software which is independent of an application software of a computer.

13. A storage medium which stores computer-readable information, and stores a program  
20 comprising:

compressing process means for causing a computer to divide a file into a plurality of sections and compress each section of the file using a plurality of compression parameters; and  
25 storing process means for causing the computer to store a compressed file in storage means.

14. The storage medium as claimed in claim 13, wherein said compressing process means  
30 causes the computer to use the plurality of compression parameters based on a distribution of an appearing frequency for each word within said file.

15. The storage medium as claimed in claim 13, wherein said compressing process means  
35 causes the computer to include a flag which indicates non-compressed data in control information

10073245.021302

of a certain section, if data in the concerned section has a larger amount of information in a form of compressed data than the non-compressed data.

5           16. The storage medium as claimed in claim 13, wherein said compressing process means causes the computer to include identification information of the compression parameters in control information of each section.

10           17. The storage medium as claimed in claim 13, wherein said compressing process means causes the computer to add end information which indicates an end of a section to an end of each section, add the end information to only a last section when the sections have a fixed length, and include a flag indicating that the end information is deleted in the control information of the sections other than the last section.

20           18. The storage medium as claimed in claim 13, wherein the program further comprising:  
expanding process means which causes the computer to expand the compressed file which is read  
25 from the storage means by a driver software which is independent of an application software of the computer.

30           19. A storage medium which stores computer-readable information, comprising:  
a region storing a file which is divided into a plurality of sections which are compressed using a plurality of compression parameters; and  
a region storing the compression parameters.

35           20. The storage medium as claimed in claim 19, wherein said compression parameters are

10073245.021302

based on a distribution of appearing frequency of an appearing frequency for each word within said file.

10073245-021302  
21. The storage medium as claimed in  
5 claim 19, wherein a flag which indicates non-compressed data is included in control information of a certain section, if data in the concerned section has a larger amount of information in a form of compressed data than the non-compressed data.

22. The storage medium as claimed in  
claim 19, wherein identification information of the compression parameters is included in control information of each section.

23. The storage medium as claimed in  
claim 19, wherein end information which indicates an end of a section is added to an end of each section, the end information is added to only a last section  
20 when the sections have a fixed length, and a flag indicating that the end information is deleted is included in the control information of the sections other than the last section.

24. The storage medium as claimed in  
25 claim 19, further storing:  
a driver software independent of an application software of a computer,  
said driver software including a program  
30 provided with expanding process means for causing the computer to expand the compressed file which is read from the storage medium.

25. A file processing method comprising:  
35 a reading step which accesses a storage medium which stores a plurality of compression parameters and a compressed file, an original file being

divided into a plurality of sections and compressed for each section using the plurality of compression parameters so as to obtain a plurality of section data forming the compressed file; and

- 5       an expanding step which expands the section data read from the storage medium by said reading step using the compression parameters corresponding to the section data.

- 10               26. The file processing method as claimed in claim 25, wherein the plurality of compression parameters are created based on a distribution of an appearing frequency for each word within said original file.

- 15               27. The file processing method as claimed in claim 25, wherein the compressed file further includes non-compressed section data of a certain section and a non-compression flag which indicates  
20       that the certain section is non-compressed, and said expanding step suppresses expansion of the certain section when the non-compression flag indicates a non-compressed state of the section data of the certain section read from the storage medium by said  
25       reading step.

28. The file processing method as claimed in claim 25, wherein identification information of the compression parameters is included in control  
30       information of each section.

29. The file processing method as claimed in claim 25, wherein a delete flag which indicates that end information indicating an end of each  
35       section is not added to the section data is included in control information of each section, and said reading step reads the section data by judging a

10073245-021302

last section based on the delete flag.

30. The file processing method as claimed  
in claim 25, wherein said expanding step is carried  
out by a driver software for the storage medium,  
said driver software being used for making access to  
the storage medium.

31. The file processing method as claimed  
in claim 30, wherein the driver software for the  
storage medium is independent of an application  
software of the computer.

32. A data processing apparatus  
comprising:  
a reading process section which controls an  
access to a storage medium which stores a plurality  
of compression parameters and a compressed file, an  
original file being divided into a plurality of  
sections and compressed for each section using the  
plurality of compression parameters so as to obtain  
a plurality of section data forming the compressed  
file; and  
an expanding process section which expands the  
section data read from the storage medium by said  
reading process section using the compression  
parameters corresponding to the section data.

33. The data processing apparatus as  
claimed in claim 32, wherein the plurality of  
compression parameters are created based on a  
distribution of an appearing frequency for each word  
within said original file.

34. The data processing apparatus as  
claimed in claim 32, wherein the compressed file  
further includes non-compressed section data of a

10073245.021302

certain section and a non-compression flag which indicates that the certain section is non-compressed, and said expanding process section suppresses expansion of the certain section when the non-compression flag indicates a non-compressed state of the section data of the certain section read from the storage medium by said reading process section.

35. The data processing apparatus as claimed in claim 32, wherein identification information of the compression parameters is included in control information of each section.

36. The data processing apparatus as claimed in claim 32, wherein a delete flag which indicates that end information indicating an end of each section is not added to the section data is included in control information of each section, and said reading process section controls reading of the section data by judging a last section based on the delete flag.

37. The data processing apparatus as claimed in claim 32, wherein said expanding process section carries out expansion by a driver software for the storage medium, said driver software being used for making access to the storage medium.

38. The data processing apparatus as claimed in claim 37, wherein the driver software for the storage medium is independent of an application software of the data processing apparatus.

39. A data processing apparatus comprising:  
a reading process section which controls an access to a storage medium which stores a plurality

10073245.021302



of compression parameters and a compressed file in response to a read request from an application software, an original file being divided into a plurality of sections and compressed for each section using the plurality of compression parameters so as to obtain a plurality of section data forming the compressed file; and

an expanding process section which expands the section data read from the storage medium by said reading process section using the compression parameters corresponding to the section data, and supplies expanded data to the application software.

40. A storage medium which stores computer-readable information, and stores a program comprising:

reading process means for causing a computer to control an access to a recording medium which stores a plurality of compression parameters and a compressed file, an original file being divided into a plurality of sections and compressed for each section using the plurality of compression parameters so as to obtain a plurality of section data forming the compressed file; and

expanding process means for causing the computer to expand the section data read from the recording medium by said reading process section using the compression parameters corresponding to the section data.

41. The storage medium as claimed in claim 40, wherein the plurality of compression parameters are created based on a distribution of an appearing frequency for each word within said original file.

42. The storage medium as claimed in

10073245.021302

claim 40, wherein the compressed file further includes non-compressed section data of a certain section and a non-compression flag which indicates that the certain section is non-compressed, and said  
5 expanding process means causes the computer to suppress expansion of the certain section when the non-compression flag indicates a non-compressed state of the section data of the certain section read from the recording medium by said reading  
10 process section.

43. The storage medium as claimed in claim 40, wherein identification information of the compression parameters is included in control  
15 information of each section.

44. The storage medium as claimed in claim 40, wherein a delete flag which indicates that end information indicating an end of each section is  
20 not added to the section data is included in control information of each section, and said reading process means causes the computer to control reading of the section data by judging a last section based on the delete flag.

25 45. The storage medium as claimed in claim 40, wherein said expanding process means causes the computer to carry out expansion by a driver software for the recording medium, said  
30 driver software being used for making access to the recording medium.

46. The recording medium as claimed in claim 45, wherein the driver software for the  
35 recording medium is independent of an application software of the computer.

10073245.021302

47. A storage medium which stores computer-readable information, and stores a program comprising:

5 reading process means for causing a computer to control an access to a recording medium which stores a plurality of compression parameters and a compressed file in response to a read request from an application software, an original file being divided into a plurality of sections and compressed  
10 for each section using the plurality of compression parameters so as to obtain a plurality of section data forming the compressed file; and

expanding process means for causing the computer to expand the section data read from the  
15 recording medium by said reading process section using the compression parameters corresponding to the section data, and supply expanded data to the application software.

20

25

30

35

1073245.021302